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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/385,739	08/30/1999	WILLIAM FRANCIS WEBER	198-0046	9607

7590 05/12/2003

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EXAMINER
FERRIS III, FRED O

ART UNIT	PAPER NUMBER
2123	9

DATE MAILED: 05/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/385,739	WEBER ET AL.	
	Examiner	Art Unit	
	Fred Ferris	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 February 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 January 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Claims 1-18 have been presented for examination based on applicant's amendment filed on 20 February 2003 (paper#8). Claims 1-18 remain rejected by the examiner.

Response to Arguments

2. Applicant's arguments filed 20 February 2003 (paper #8) have been fully considered.

Regarding applicant's response to objection to the specification: Applicants have amended the specification to include U.S. Patent Application SN 08/984,806 (now U.S. 6,403,235) by reference. Accordingly, the reference has now been considered by the examiner and the objection to the specification is withdrawn.

Regarding applicant's response to obviousness-type double patenting: Applicants have amended independent claims to distinguish the claimed invention over U.S. 6,096,086. Accordingly, the examiner withdraws the obviousness-type double patenting rejection in view of the amendment to the claims.

Regarding applicant's response to 35 U.S.C 102(e) rejection: Applicants have argued that Weber et al (U.S. 6,110,216) does not disclose parametric design of an instrument panel support structure, electronically generating a parametric design, inputting parameters, determining if design meets predetermined criteria, and using a computer-aided analytical technique. The examiner asserts that even as currently amended the limitations of independent claims 1, 7, and 16 are clearly disclosed by

U.S. 6,110,026 as cited below under 35 U.S.C. 102(e) rejections. (Figure 1 alone discloses nearly all of the limitations of claims 1, 7, and 16) Further, designing an instrument support structure is inherent since U.S. 6,110,216 discloses parametric design of ***portions*** *of an automotive design which would obviously include an instrument panel support structure. Accordingly, the examiner maintains the 102(e) rejections of claims 1, 7, and 16.*

Regarding applicant's response to 35 U.S.C. 103(a) rejections: It is noted that applicants have not specifically addressed the merits of the rejections and combination of references as cited in the previous office action (paper#6) and have instead provided allegation, opinion, and commentary about what the art does and does not teach. Applicants have further alleged that there is no motivation to combine the references but have provided no factual basis for the allegation.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicants have argued that prior art does not disclose the combination of parametric design of an instrument support panel, selecting a vehicle structure from a stored library, orienting an occupant, locating the support structure, generating a parametric design, using input parameters, and determining if the design meets a predetermined criteria. The examiner asserts that, as previously cited, Cavendish

teaches a method for computer design of ***automotive vehicle panels*** *where input* ***parameters using three dimensional coordinates*** *are used to* ***generate*** *(output) a* ***panel design*** *based on user or* ***predetermined criteria****. (functional objectives and requirements) The Cavendish method also discloses* ***selecting a structure*** *from a* ***stored library*** *of generic objects and allows for the* ***location of objects (locating steering would be obvious)*** *within the design.* ***(an occupant is also obviously and object)*** *The Cavendish method further accepts feature based* ***input information (predetermined criteria)*** *that describes a particular geometry and permits design* ***modification*** *to* ***generate*** *an output design of automotive panels that can include instruments. (Abstract, Summary of Invention, CL1-L10-25, CL2-L25, CL2-L35-63, CL7-L17, CL8-L18-40, CL9-L37, CL12-L53-60, CL 14-L4-25, Figs. 2-8)*

Saxton teaches a parametric design method which allows a computer to create, interpret, and relate modules for designing and directing the ***production of a manufactured part*** *by creating an electronically stored image of the part which may be scaled and dimensioned. Saxton also discloses* ***selecting a structure*** *from a* ***stored library*** *of objects. (obviously, a* ***support structure*** *for an instrument panel could be selected) (Abstract, Summary of Invention, CL2-L53-65, CL4-L6-55, Figs. 5, 8, 51-57)*

Accordingly, the examiner maintains the 103(a) rejections.

Claim Rejections - 35 USC § 102

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. ***Claims 1, 7 and 16 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by U.S. Patent 6,110,216 issued to Weber et al.***

Regarding independent claims 1, 7, and 16: Weber teaches a computer based method for ***parametric design*** *of* ***portions*** *of an* ***automotive design*** *where input parameters* ***using three dimensional (3-D) coordinates*** *are used to* ***generate*** *(output) a* ***design*** *based on user or* ***predetermined criteria****. (designing an instrument panel would be inherent as well as obvious) The method discloses* ***selecting a structure*** *from a* ***stored library*** *of generic objects and allows for the* ***location of objects (including locating steering and occupant)*** *within the design. The method also teaches* ***selecting, verifying, and modifying parameter*** *and* ***predetermined conditions*** *as part of the design process. The method further accepts feature based input information (****predetermined criteria****) that describes a particular geometry and*

permits design ***modification*** *to* ***generate*** *an output design and packaging of automotive portions. (Abstract, Summary of Invention (especially CL2-L17-19, 23-27, 41-44, 45), CL4- L1-63 (especially L33), CL7-L62-CL8-L55 (especially L32-34), Figs. 1-4, 17-23, CL9-L35-CL10-L2 (especially L49))*

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. ***Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 5,119,309 issued to Cavendish et al in view of U.S. Patent 4,882,692 issued to Saxton et al.***

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-6 are drawn to:
Parametric design of vehicle instrument panel
Selecting a structure from a library
Orienting occupant
Locating instrument structure relative to the vehicle body
Determining input parameter in 3-D coordinates
Generating/modifying a design electronically based on predetermined criteria

Regarding claims 1-6: Cavendish teaches a method for computer design of ***automotive vehicle panels*** *where input parameters* ***using three dimensional coordinates*** *are used to* ***generate*** *(output) a* ***panel design*** *based on user or* ***predetermined criteria****. (functional objectives and requirements) The Cavendish method further accepts feature based input information (predetermined criteria) that describes a particular geometry and permits design* ***modification*** *to* ***generate*** *an output design of automotive panels that can include instruments. (Abstract, Summary of Invention, CL1-L10-25, CL2-L25, CL2-L35-63, CL7-L17, CL8-L18-40, CL9-L37, CL12-L53-60, Figs. 2-8)*

Cavendish mentions, but does not explicitly teach parametric design.

Saxton teaches a parametric design method which allows a computer to create, interpret, and relate modules for designing and directing the ***production of a manufactured part*** *by creating an electronically stored image of the part which may be scaled and dimensioned. (Abstract, Summary of Invention, CL2-L53-65, CL4-L6-55, Figs. 5, 8, 51-57)*

It would have been obvious to one having ordinary skill in the art at the time the claimed invention was made to modify the teachings Cavendish relating to a method for computer design of ***automotive vehicle panels*** *where input parameters* ***using three***

dimensional coordinates *are used to* ***generate*** *(output) a* ***panel design*** *based on user or* ***predetermined criteria****, with the teachings of Saxton relating to a parametric design method which allows a computer to create, interpret, and relate modules for designing and directing the* ***production of a manufactured part*** *to realize a method of parametric design of an instrument panel support structure. An obvious motivation exists since, as referenced by prior art, the use of parametric design techniques improves the manufacturing efficiency and cost effectiveness of the design process.*

Claims 7-15 are drawn to:
Parametric design of vehicle instrument panel
Selecting a structure
Orienting an occupant
Locating steering
Determining input in 3-D
Generating/varying/comparing electronically input design parameters

Regarding claims 7-15: As previously mentioned, Cavendish teaches a method for computer design of ***automotive vehicle panels*** *where input parameters* ***using three dimensional coordinates*** *are used to* ***generate*** *(output) a* ***panel design*** *based on user or* ***predetermined criteria****. (functional objectives and requirements) The Cavendish method also discloses* ***selecting a structure*** *from a* ***stored library*** *of generic objects and allows for the* ***location of objects (locating steering would be obvious)*** *within the design. The Cavendish method further accepts feature based input information (predetermined criteria) that describes a particular geometry and permits design* ***modification*** *to* ***generate*** *an output design of automotive panels that can*

include instruments. (Abstract, Summary of Invention, CL1-L10-25, CL2-L25, CL2-L35-63, CL7-L17, CL8-L18-40, CL9-L37, CL12-L53-60, CL 14-L4-25, Figs. 2-8)

Cavendish mentions, but does not explicitly teach parametric design.

Saxton teaches a parametric design method which allows a computer to create, interpret, and relate modules for designing and directing the ***production of a manufactured part*** *by creating an electronically stored image of the part which may be scaled and dimensioned. Saxton also discloses* ***selecting a structure*** *from a* ***stored library*** *of objects. (Abstract, Summary of Invention, CL2-L53-65, CL4-L6-55, Figs. 5, 8, 51-57)*

It would have been obvious to one having ordinary skill in the art at the time the claimed invention was made to modify the teachings Cavendish relating to a method for computer design of ***automotive vehicle panels*** *where input parameters* ***using three dimensional coordinates*** *are used to* ***generate*** *(output) a* ***panel design*** *based on user or* ***predetermined criteria****, with the teachings of Saxton relating to a parametric design method which allows a computer to create, interpret, and relate modules for designing and directing the* ***production of a manufactured part*** *to realize a method of parametric design of an instrument panel support structure. An obvious motivation exists since, as referenced by prior art, the use of parametric design techniques improves the manufacturing efficiency and cost effectiveness of the design process.*

Claims 16-18 are drawn to:
Parametric design of vehicle instrument panel
Selecting from a library
Orienting the occupant/steering

Selecting/verifying/modifying parameters/predetermined conditions electronically Generating design/packaging

Regarding claims 16-18: As previously mentioned, Cavendish teaches a method for computer design of ***automotive vehicle panels*** *where input parameters* ***using three dimensional coordinates*** *are used to* ***generate*** *(output) a* ***panel design*** *based on user or* ***predetermined criteria****. (functional objectives and requirements) The Cavendish method also discloses* ***selecting a structure*** *from a* ***stored library*** *of generic objects and allows for the* ***location of objects (locating steering or an occupant would be obvious)*** *within the design. The Cavendish method further accepts feature based input information (predetermined criteria) that describes a particular geometry and permits design* ***modification*** *to* ***generate*** *an output design of automotive panels that can include instruments. (Abstract, Summary of Invention, CL1-L10-25, CL2-L25, CL2-L35-63, CL7-L17, CL8-L18-40, CL9-L37, CL12-L53-60, CL 14-L4-25, Figs. 2-8)*

Cavendish mentions, but does not explicitly teach parametric design.

Saxton teaches a parametric design method which allows a computer to create, interpret, and relate modules for designing and directing the ***production of a manufactured part*** *by creating an electronically stored image of the part which may be scaled and dimensioned. Saxton also discloses* ***selecting a structure*** *from a* ***stored library*** *of objects. (Abstract, Summary of Invention, CL2-L53-65, CL4-L6-55, Figs. 5, 8, 51-57)*

It would have been obvious to one having ordinary skill in the art at the time the claimed invention was made to modify the teachings Cavendish relating to a method for computer design of ***automotive vehicle panels*** *where input parameters* ***using three dimensional coordinates*** *are used to* ***generate*** *(output) a* ***panel design*** *based on user or* ***predetermined criteria****, with the teachings of Saxton relating to a parametric design method which allows a computer to create, interpret, and relate modules for designing and directing the* ***production of a manufactured part*** *to realize a method of parametric design of an instrument panel support structure. An obvious motivation exists since, as referenced by prior art, the use of parametric design techniques improves the manufacturing efficiency and cost effectiveness of the design process.*

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, ***THIS ACTION IS MADE FINAL****. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).*

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

The prior art previously made of record and not relied upon is considered pertinent to applicant's disclosure, careful consideration should be given prior to applicant's response to this Office Action.

U.S. Patent 5,293,479 issued to Quintero et al teaches parametric design and manufacturing.

U.S. Patent 5,197,120 issued to Saxton et al teaches methods for generating parametric designs.

"Rapid: Prototyping Control Panel Interfaces" K. Freburger, OOPSLA Proceedings, ACM 0-89791-247-0/87/0010-0416, 1987 teaches control panel design.

"Interactive Graphics Package for Human Engineering and Layout of Vehicle Workspace", G. Rabideau, ACM Special Interest Group on Design Automation, 1976 teaches vehicle component design.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Ferris whose telephone number is 703-305-9670 and whose normal working hours are 8:30am to 5:00pm Monday to Friday.

Any inquiry of a general nature relating to the status of this application should be directed to the group receptionist whose telephone number is 703-305-3900.

The Official Fax Numbers are:

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Official	(703) 746-7239
Non-Official/Draft	(703) 746-7240

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May 4, 2003